than blunt bodies can. That is, as the pointed part of an electrified body will diſcharge the atmoſphere of that body, or communicate it fartheſt to another body, ſo the point of an unelectrified body, will draw off the electrical atmoſphere from an electrified body, farther than a blunter part of the ſame unelectrified body will do. Thus a pin held by the head, and the point preſented to an electrified body, will draw off its atmoſphere at a foot diſtance; where if the head were preſented inſtead of the point, no ſuch effect would follow. To underſtand this, we may conſider, that if a perſon ſtanding on the floor would draw off the electrical atmoſphere from an electrified body, an iron crow and a blunt knitting kneedle held alternately in his hand and preſented for that purpoſe, do not draw with different forces in proportion to their different maſſes. For the man, and what he holds in his hand, be it large or ſmall, are connected with the common maſs of unelectrified matter; and the force with which he draws is the ſame in both caſes, it conſiſting in the different proportion of electricity in the electrified body and that common maſs. But the force with which the electrified body retains its atmoſphere by attracting it, is proportioned to the ſurface over which the particles are placed; i. e. four ſquare inches of that ſurface retain their atmoſphere with four times the force that one ſquare inch retains its atmoſphere. And as in plucking the hairs from the horſe's tail, a degree of ſtrength inſufficient to pull away a handful at once, could yet eaſily ſtrip it hair by

hair; ſo a blunt body preſented cannot draw off a number of particles at once, but a pointed one, with no greater force, takes them away eaſily, particle by particle.

18. Theſe explanations of the power and operation of points, when they firſt occurr'd to me, and while they firſt floated in my mind, appeared perfectly ſatisfactory; but now I have wrote them, and conſider'd them more cloſely in black and white, I muſt own I have ſome doubts about them: yet as I have at preſent nothing better to offer in their ſtead, I do not croſs them out: for even a bad ſolution read, and its faults diſcover'd, has often given riſe to a good one in the mind of an ingenious reader.

19. Nor is it of much importance to us, to know the manner in which nature executes her laws; 'tis enough if we know the laws themſelves. 'Tis of real uſe to know, that china left in the air unſupported will fall and break; but *how* it comes to fall, and *why* it breaks, are matters of ſpeculation. 'Tis a pleaſure indeed to know them, but we can preſerve our china without it.

20. Thus in the preſent caſe, to know this power of points, may poſſibly be of ſome uſe to mankind, though we ſhould never be able to explain it. The following experiments, as well as thoſe in my firſt paper, ſhow this power. I have a large prime conductor made of ſeveral thin ſheets of Fuller's paſteboard form'd into a tube, near 10 feet long and a foot diameter. It is cover'd with *Dutch* emboſs'd paper, almoſt totally gilt. This large

BENJAMIN FRANKLIN *Experiments and Observations on Electricity* LONDON, 1751 THE WARNOCK LIBRARY Octavo